

**Remarks:**

The applicants have made a minor amendment to the specification to correct a typographical mistake. The applicants have also made amendments to claims **1, 12, 17-19, 31-32** to overcome the Examiner's rejections. Due support for these amendments is found in the specification including, in particular, page 13 lines 4-7. No new matter is being introduced by these amendments.

The applicants thank the Examiner for considering all references submitted in the Information Disclosure Statement per duty to disclose of 37 CFR 1.56.

The applicants also thank the Examiner for approving the drawings.

**Novelty Rejections under 35 U.S.C. §102**

The Examiner has rejected claims **1-5, 15, 18-22, 29** and **32** under 35 U.S.C. 102(b) as being clearly anticipated by Lapeyre (US Pat. 3,400,390).

Specifically, claims **1, 18, 19** and **32** were rejected by the Examiner based on figure 1 and figure 2. Based on amendments to claims **1, 18, 19** and **32** these rejections are obviated. Specifically, these claims now specify that the "line of said reference path and said line of said first path are non-parallel". Thus, as explained in the specification with reference to the applicants' figure 1, the beams in the present invention produce detection signals at times  $t_r$  and  $t_1$  that vary as a function of angular velocity  $\omega$ , distance  $r$  and degree to which they are

non-parallel. Meanwhile, Lapeyre teaches the use of two beams whose portions are substantially parallel (see, e.g., col. 3 lns. 14-25 and claim 1). Therefore, the applicants submit that the difference is novel over Lepeyre in the sense of 35 U.S.C. §102. Furthermore, this difference is unobvious over Lepeyre in the sense of 35 U.S.C. §103, since Lepeyre does not suggest and a person of average skill in the art would not be motivated to orient the beams in a non-parallel relationship. Therefore, claims **1**, **18**, **19** and **32** are submitted to be patentable over Lepeyre.

The Examiner has rejected claims **2** and **20** indicating that a non-collinear folded path portion is shown in figure 1 of Lepeyre. The applicants submit that claims **2** and **20** are novel and unobvious by virtue of being dependent on claims **1** and **19** shown to be novel and unobvious above.

The Examiner has rejected claims **3** and **21** over rotation mechanism shown by figure 1 reference 32 of Lepeyre. The applicants submit that claims **3** and **21** are novel and unobvious by virtue of being dependent on claims **1** and **19** shown to be novel and unobvious above. Independently of the above, the applicants note that rotation using a mirror is a non-obvious change, since the mirror enforces twice the deflection angle due to the law of reflection.

The Examiner has further rejected claims **4** and **22** over figure 1 of Lepeyre showing the reference and first paths being in a common plane. The applicants submit that claims **4** and **22** are novel and unobvious by virtue of being dependent on claims **1** and **19** shown to be novel and unobvious above.

The Examiner has also rejected claim **5** over reference 46 of figure 1 of Lepeyre. The applicants submit that claim **5** is novel and unobvious by virtue of being dependent on claim **1** shown to be novel and unobvious above.

The Examiner has rejected claims **15** and **29** over angular velocity unit of figure 2 of Lepeyre. The applicants submit that claims **15** and **29** are novel and unobvious by virtue of being dependent on claims **1** and **19** shown to be novel and unobvious above.

The Examiner has rejected claims **17** and **31** as being clearly anticipated by Keren-Gill (U.S. Pat. 4,911,548). Specifically, the Examiner refers to col. 3, lines 35-40 and figure 1a-1c and a determination unit in columns 2-3. The amended claims **17** and **31** employ a total of three beams, a reference beam, a first beam and a second beam in a geometrical arrangement that is different from Keren-Gill's. The geometric arrangement permits to obtain angular velocity  $\omega$ , as presently claimed, from times from

times  $t_r$  and  $t_2$  of reference and second beams. This is submitted to be novel over Keren-Gill. Furthermore, it is submitted to be unobvious because it yields a new result that can not be achieved by Keren-Gill. Based on this, it is submitted that claims **17** and **31** are novel and unobvious over Keren-Gill in the sense of 35 U.S.C. §102&§103, and therefore patentable over Keren-Gill.

**Obviousness Rejections under 35 U.S.C. §103**

The Examiner has rejected claims **6, 12, 14, 16** and **25** under 35 U.S.C. 103(a) as being unpatentable over Lapeyre (US Pat. 3,400,390).

As to claims **6, 12, 14, 16** and **25** taken jointly, the applicants submit that because they depend from main claims shown to be novel and unobvious over Lapeyre above, they are unobvious over Lapeyre in the sense of 35 U.S.C. §103 by virtue of adding further limitations. Furthermore, specifically in reference to the use of second beam, it would be unobvious to use a second beam that shares the same center of rotation, because such beam yields no information about distance  $r$ . The reason the present invention employs the second beam is to independently derive information about angular velocity  $\omega$ . This is not merely multiplying a part for multiple effect as recited in re Harza (cited by the Examiner), but providing an entirely

new effect/function for which Lapeyre requires a separate apparatus (figure 1, Ref 37).

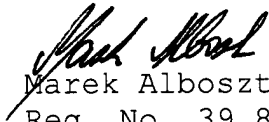
The Examiner further rejected claims **7-11, 13, 23, 24** and **26** under 35 U.S.C. 103(a) as being unpatentable over Lapeyre (US Pat. 3,400,390) in view of Korah (U.S. Pat. 6,115,111).

As to claims **7-11, 13, 23, 24** and **26** taken jointly, the applicants submit that because they depend from main claims shown to be novel and unobvious over Lapeyre above, they are unobvious over Lapeyre in the sense of 35 U.S.C. §103 by virtue of adding further limitations. Furthermore, even if these claims were not unobvious over Lapeyre by virtue of their dependency on claims unobvious over this reference, the applicants maintain that there is no motivation to combine Lapeyre and Korah. The levels of precision in the parallel beams of Lapeyre would preclude the ability of a person of average skill in the art to apply the techniques of Korah, which relate to highly precise and well-aligned semiconductor lasers taught by Korah.

### **Conclusion**

In view of the above amendments and arguments, the applicants submit all claims **1-32** have been placed in condition for allowance over the art of record.

Respectfully submitted,

  
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